

## REMARKS/ARGUMENTS

Claims 20-38 are pending in the present application. Claims 1-19 have previously been cancelled in a Preliminary Amendment filed January 5, 2004. Claims 20 and 27 are independent.

### Office Action on Incorrect Claim Set

It is apparent from the Office Action that the incorrect set of claims was acted upon. A Preliminary Amendment was filed January 5, 2004 along with the filing of this Divisional application. This Preliminary Amendment cancelled claims 1-19. Proof of filing the Preliminary Amendment is attached hereto by a printed copy of the file history from Private Pair. Furthermore, a courtesy copy of this Preliminary Amendment is attached hereto.

It is respectfully requested that the Examiner act upon the correct set of claims, namely claims 20-38 rather than the cancelled claims.

### 35 U.S.C. § 112, Second Paragraph Rejection

Claims 9-19 are rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed.

As pointed out above, claims 1-19 were previously cancelled in the Preliminary Amendment filed January 5, 2004. Therefore, this rejection is moot. Furthermore, Applicants respectfully request reconsideration and withdrawal of this rejection.

**Obviousness-Type Double Patenting Rejection**

Claims 1-19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,718,139. This rejection is respectfully traversed.

First of all, claims 1-19 were cancelled in the Preliminary Amendment filed January 5, 2004 thereby clearly rendering this rejection improper and moot.

Furthermore, Examiner Michael Kinfe Negash imposed a Restriction Requirement in the parent application 09/660,388 which later became USP 6,718,139. This Restriction Requirement was imposed by Examiner Negash via telephone on December 12, 2003. At that time, Applicants' representative Michael R. Cammarata agreed to cancellation of non-elected claims 20-38 provided that the Restriction Requirement was properly documented. Examiner Negash agreed to provide such documentation as is reflected in the Interview Summary form dated December 16, 2003 a copy of which is attached hereto.

Under to provisions of 35 U.S.C. § 121, it is considered improper to impose a double patenting rejection once the Examiner has imposed a Restriction Requirement. Applicants have merely filed the non-elected, restricted invention of claims 20-38 in this Divisional application. Contrary to 35 U.S.C. § 121, the Examiner has imposed a double patenting rejection. Applicants do realize that this Restriction Requirement is relative to the cancelled claims 1-19 but Applicants nevertheless advise that Examiner that no such Restriction Requirement can be made relative to the non-elected claims that were filed in this Divisional Application.

For all of the above reasons, taken alone or in combination, Applicants respectfully request reconsideration and withdrawal of the double patenting rejection.

**Conclusion**

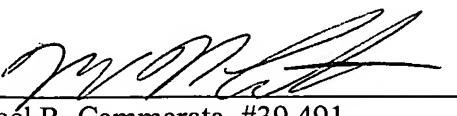
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request the Examiner to reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Should the Examiner believe that any outstanding matters remain in the present application, the Examiner is respectfully requested to contact Michael R. Cammarata (Reg. No. 39,491) at the telephone number of the undersigned to discuss the present application in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By   
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4450-0421P  
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Search results as of: 2-8-2005::14:11

**Search results for application number: 10/750,808**

Application Number:	10/750,808	Customer Number:	2292
Filing or 371(c) Date:	01-05-2004	Status:	Non Final Ac Mailed
Application Type:	Utility	Status Date:	01-24-2005
Examiner Name:	NEGASH, KINFE MICHAEL	Location:	ELECTRONI
Group Art Unit:	2633	Location Date:	-
Confirmation Number:	1621	Earliest Publication No:	US 2004-013 A1
Attorney Docket Number:	4450-0421P	Earliest Publication Date:	07-15-2004
Class/ Sub-Class:	398/059	Patent Number:	-
First Named Inventor:	Christopher Finan, Cupertino, CA	Issue Date of Patent:	-
Title Of Invention:	Optical fiber ring communication system		

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**File History**

Date	Contents Description
01-05-2004	Reference capture on IDS
11-09-2004	Preliminary Amendment
01-05-2004	Preliminary Amendment
01-24-2005	Mail Non-Final Rejection
01-21-2005	Non-Final Rejection
11-09-2004	Workflow incoming amendment IFW
10-26-2004	Case Docketed to Examiner in GAU
07-15-2004	IFW TSS Processing by Tech Center Complete
07-15-2004	Case Docketed to Examiner in GAU
04-08-2004	Application Return from OIPE
04-08-2004	Application Return TO OIPE
04-08-2004	Application Dispatched from OIPE
04-09-2004	Application Is Now Complete
02-27-2004	Cleared by OIPE CSR
01-25-2004	IFW Scan & PACR Auto Security Review



01-05-2004

|Initial Exam Team nn

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PATENT  
4450-0421P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Christopher D. FINAN et al.

Appl. No.: Divisional of  
Serial No. 09/660,388

Filed: January 5, 2004

For: OPTICAL FIBER RING COMMUNICATION SYSTEM

PRELIMINARY AMENDMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

January 5, 2004

Sir:

The following preliminary amendments and remarks are respectfully submitted in connection with the above-identified application.

This amendment includes Claim Set As Amended and Remarks.

AMENDMENTS TO THE CLAIMS

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)
18. (Cancelled)
19. (Cancelled)
20. (Previously Presented) A configuration for an optical fiber ring network, comprising:

two or more nodes, each node including,  
a multiplexing device,

a client device, and  
redundant signal connections between the multiplexing device  
and the client device; and  
redundant signal paths connecting the nodes, each of the  
redundant signal paths including an optical fiber link operable to  
transmit data bi-directionally between each pair of connected  
nodes,

wherein the multiplexing device is configured to selectively  
transmit outgoing data from the client device, and selectively  
receive incoming data destined for the client device, over each of  
the redundant signal paths, the multiplexing device being  
selectively linked to the client device for data communications by  
each of the redundant signal connections.

21. (Previously Presented) The configuration of claim 20,  
wherein the redundant signal connections includes a primary  
connection and a backup connection each being operable to convey  
the incoming and outgoing data between the multiplexing device and  
the client device, the backup connection enabling the incoming and  
outgoing data to be routed around a link failure occurring in the  
primary connection.

22. (Previously Presented) The configuration of claim 20,  
wherein the redundant signal connections include,

first and second link cards, each operable to communicate data between the multiplexing device and the client device; and

a switching apparatus operable to activate one of the first and second link cards, wherein

the activated link card conveys the outgoing data from the client device to the multiplexing device, and conveys the incoming data from the multiplexing device to the client device.

23. (Previously Presented) The configuration of claim 22, wherein the activated link card is a Fiber Channel (FC) link card.

24. (Previously Presented) The configuration of claim 22, wherein

the redundant data paths include a first and second data path; the multiplexing device includes a first and a second multiplexing unit configured to transmit the outgoing data and receive the incoming data over the first and second signal path, respectively; and

the activated link card selectively links the client device to each of the first and second multiplexing units for data communications.

25. (Previously Presented) The configuration of claim 22, wherein the first link card is configured to operate according to

Fibre Channel (FC) protocol and the second link card is configured to operate according to Ethernet protocol.

26. (Previously Presented) The configuration of claim 20, wherein

the multiplexing device includes a coarse optical wavelength multiplexer and demultiplexer operable to transmit a first data stream over the optical fiber cable using a first optical wavelength and to receive a second data stream over the optical fiber cable using a second optical wavelength.

27. (Previously Presented) An apparatus for use at a node of an optical fiber ring network, comprising:

redundant data paths each including an optical fiber link operable to transmit data bi-directionally between the node and another node in the network; and

a multiplexing device configured to selectively transmit outgoing data from a client device, and selectively receive incoming data destined for the client device, over each of the redundant signal paths, the multiplexing unit being selectively linked to the client device for data communications by redundant signal connections,

wherein the multiplexing device is operable to selectively transmit and receive the incoming and outgoing data, respectively, according to Fibre Channel (FC) protocol.

28. (Previously Presented) The apparatus of claim 27, wherein the redundant signal connections include,

first and second link cards, each operable to communicate data between the multiplexing device and the client device; and

a switching apparatus operable to activate one of the first and second link card, wherein

the activated link card conveys the outgoing data from the client device to the multiplexing device, and conveys the incoming data from the multiplexing device to the client device.

29. (Previously Presented) The apparatus of claim 28, wherein the redundant data paths include a first and a second data path;

the multiplexing device includes a first and second multiplexing unit configured to transmit the outgoing data and receive the incoming data over the first and second signal path, respectively; and

the activated link card selectively links the client device to each of the first and second multiplexing units for data communications.

30. (Previously Presented) The apparatus of claim 29, wherein the first and second link cards each include an inbound FIFO frame buffer with memory capacity for storing at least 120 Fibre Channel frames sent by the client device to the link card and an outbound FIFO frame buffer with memory capacity for storing at least 120 Fibre Channel frames sent by another device to the link card for transmission to the client device.

31. (Previously Presented) The apparatus of claim 30, wherein the first and second link cards each include circuitry for exchanging buffer credit signals with another link card coupled thereto by one of the first and second optical fiber cables so as to pre-fill the outbound FIFO frame buffer with frames of data before the client device sends flow control messages to request the transmission of those data frames by another client device coupled to the other link card.

32. (Previously Presented) The apparatus of claim 30, wherein the first and second link cards each includes flow control circuitry for pre-filling the outbound FIFO frame buffer with frames of data before the client device sends flow control messages to request the transmission of those data frames.

33. (Previously Presented) The apparatus of claim 29, wherein the first and second link cards each include an inbound FIFO frame buffer for storing frames sent by the client device to the link card and an outbound FIFO frame buffer for storing frames sent by another device to the link card for transmission to the client device; and

the first and second link cards each store data into the inbound FIFO frame buffer and read data from the outbound FIFO frame buffer at a first clock rate associated with the client device, and read data from the inbound FIFO frame buffer for transmission to the multiplexer device and store data received from the multiplexer device into the outbound FIFO frame buffer at a second clock rate associated with the link card, whereby the data stream sent and received to and from the client device is retimed from the first clock rate to the second clock rate.

34. (Previously Presented) The apparatus of claim 33, wherein data streams sent and received to and from the client device are Fibre Channel data streams, the first clock rate is approximately 1.0625 Gbps, and the second clock rate is at least 1.25 Gbps.

35. (Previously Presented) The apparatus of claim 33, wherein the multiplexer device includes a smoothing circuit that retimes the first data stream sent from the client device from the second

clock rate to a third clock rate associated with the first multiplexer device, the multiplexer device transmitting the first data stream over one of the first and second optical fiber cables at the third clock rate.

36. (Previously Presented) The apparatus of claim 27, wherein the multiplexing device includes a coarse optical wavelength multiplexer and demultiplexer operable to transmit a first data stream over the optical fiber cable using a first optical wavelength and to receive a second data stream over the optical fiber cable using a second optical wavelength.

37. (Previously Presented) The apparatus of claim 2, wherein the optical wavelength division multiplexer and demultiplexer is a coarse optical wavelength division multiplexer and demultiplexer, which is operable to:

send the first data stream using, and receive the fourth data stream at, a first optical wavelength, and  
send the second data stream using, and receive the third data stream at, a second optical wavelength.

38. (Previously Presented) The apparatus of claim 13, wherein the optical wavelength division multiplexer and demultiplexer is a

coarse optical wavelength division multiplexer and demultiplexer,  
which is operable to:

send the first combined data stream using, and receive the  
fourth combined data stream at, a first optical wavelength, and

send the second data stream using, and receive the third data  
stream at, a second optical wavelength.

REMARKS

Claims 20-38 are pending in the present application. Claims 1-19 have been cancelled.

Entry of the above amendments is earnestly solicited. An early and favorable first action on the merits is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael R. Cammarata, Reg. No. 39,491 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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